

**REMARKS**

The Office Action mailed May 26, 2004, has been received and reviewed. Claims 1 through 15 are currently pending in the application, of which claims 1 through 6 are currently under examination and claims 8 through 15 have been added for consideration. Claim 7 is canceled from consideration as being drawn to a non-elected invention. Applicants herein acknowledge the restriction requirement in the above-referenced application, and affirm the election to prosecute the claims of Group I, claims 1 through 6, without further traverse. Claim 7 has been canceled. Claims 1 through 6 stand rejected. Applicants respectfully request reconsideration of the application for the reasons stated herein.

**Information Disclosure Statement**

Please note that an Information Disclosure Statement was filed herein on September 26, 2003, and that while page 1 of the PTO-1449 was returned with the outstanding Office Action, page 2 containing the reference to Brueggemann et al. was not considered due to an inaccurate reference number. Applicants submit herewith a Supplemental Information Disclosure Statement correctly listing the reference. Applicants respectfully request that the information cited on the PTO-1449 be made of record herein.

**35 U.S.C. § 103(a) Obviousness Rejections**

Obviousness Rejection Based on U.S. Patent No. 5,961,437 to Smith et al. in view of U.S. Patent No. 5,445,795 to Lancaster et al.

Claims 1 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith et al. (U.S. Patent No. 5,961,437) in view of Lancaster et al. (U.S. Patent No. 5,445,795).

Applicants respectfully traverse this rejection, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations.**

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added).

Regarding claim 1, the Office Action states, that “[a]lthough Smith et al. clearly discloses excavating soil adjacent and/or below a known waste site, Smith et al. does not disclose determining if the excavated soil contains pollutants leached drums or the like, known to be in the waste site. See col. 4. However, Lancaster et al. teaches pollution detection and monitoring has become of utmost importance; and that one of the more common pollutants is volatile organic compounds or (VOCs).”

However, for a valid 35 U.S.C. § 103(a) rejection, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Applicants respectfully assert that neither Smith et al. nor Lancaster et al. teach the limitation of “sensing means **disposed adjacent the conveyer means** for sensing selected physical properties of the **material carried by the conveyer means**.” (Emphasis added). Applicants can find no reference to any type of conveyer means in the Lancaster et al. reference. With no description or disclosure of a conveyer means, it is clear there can be no reference to a sensing means disposed adjacent the conveyer means.

Additionally, while Smith et al. discloses a conveyer means it does not disclose or describe **a sensing means disposed adjacent the conveyer means for sensing selected physical properties of the material carried by the conveyer means**. To the contrary, Smith et al. states that “the cutting chain and grout injector assembly 333 and soil conveyer 933 operate to excavate earthen material 985 from beneath the in-situ portion of earth 216 without removing said in-situ portion, and discharges the soil 985 on the ground as shown in FIG. 6 where it lies conveniently accessible for testing if desired.” Therefore, a 35 U.S.C. § 103(a) rejection is not proper because the prior art references of Smith et al. and Lancaster et al., alone or in combination, do not teach or suggest all the claim limitations of claim 1. As a result, Applicants respectfully request that the rejection of claim 1 be withdrawn.

Regarding claim 5, Applicants respectfully submit that, while the Lancaster et al. reference may disclose a sensing means for detecting VOCs, it does not disclose an acousto-optic tunable filter as the sensing means, as recited in claim 5. Rather, the Lancaster et al. reference discloses and describes a “vapochromic sensor responsive to the presence of a VOC, wherein the vapochromic sensor undergoes a color change when in contact with a VOC” (col. 2, lines 45-47). In contrast, claim 5 recites an acousto-optic tunable filter, which analyzes absorption bands of various VOCs using near infrared spectroscopy and an acousto-optical tuner to create a bandpass filter for identifying the presence and concentration of various VOCs. In addition, claim 5 is allowable because it depends from now allowable claim 1. For these reasons, claim 5 is now allowable and Applicants request that the rejection of claim 5 be withdrawn.

Obviousness Rejection Based on U.S. Patent No. 5,961,437 to Smith et al. in view of U.S. Patent No. 5,445,795 to Lancaster et al. as applied to claim 1 above, and further in view of U.S. Patent No. 3,646,347 to Farmer et al.

Claims 2, 4 and 6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith et al. (U.S. Patent No. 5,961,437) in view of Lancaster et al. (U.S. Patent No. 5,445,795) as applied to claim 1 above, and further in view of Farmer et al. (U.S. Patent No. 3,646,347). Applicants respectfully traverse this rejection, as hereinafter set forth.

Claims 2, 4, and 6 depend from now allowable claim 1. As a result, claims 2, 4, and 6, are allowable and Applicants respectfully request that the rejection of claims 2, 4, and 6 be withdrawn.

Obviousness Rejection Based on U.S. Patent No. 5,961,437 to Smith et al. in view of U.S. Patent No. 4,260,885 to Albert

Claims 1 and 3 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith et al. (U.S. Patent No. 5,961,437) in view of Albert (U.S. Patent No. 4,260,885). Applicants

respectfully traverse this rejection, as hereinafter set forth.

Regarding claim 1, the Office Action states, that “[a]lthough Smith et al. clearly discloses excavating soil adjacent and/or below a known waste site, Smith et al. does not disclose determining if the excavated soil contains pollutants leached drums or the like, known to be in the waste site. See col. 4. However, Albert ‘885 teaches a method and apparatus for reading out data from an X-Ray fluorescence detector (64); for use in spectroscopy to determine particle composition of a material.”

However, for a valid 35 U.S.C. § 103(a) rejection, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Applicants respectfully assert that neither Smith et al. nor Albert teach the limitation of “sensing means **disposed adjacent the conveyer means** for sensing selected physical properties of the **material carried by the conveyer means**.” (Emphasis added). Applicants can find no reference to any type of conveyer means in the Albert reference. With no description or disclosure of a conveyer means, it is clear there can be no reference to a sensing means disposed adjacent the conveyer means.

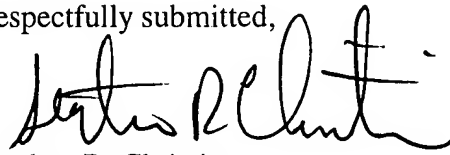
Additionally, while Smith et al. discloses a conveyer means it does not disclose or describe **a sensing means disposed adjacent the conveyer means for sensing selected physical properties of the material carried by the conveyor means**. On the contrary, Smith et al. states that “the cutting chain and grout injector assembly 333 and soil conveyer 933 operate to excavate earthen material 985 from beneath the in-situ portion of earth 216 without removing said in-situ portion, and discharges the soil 985 on the ground as shown in FIG. 6 where it lies conveniently accessible for testing if desired.” Therefore, a 35 U.S.C. § 103(a) rejection is not proper because the prior art references of Smith et al. and Albert, alone or in combination, do not teach or suggest all the claim limitations of claim 1. As a result, Applicants respectfully request that the rejection of claim 1 be withdrawn.

Regarding claim 3, this claim depends from now allowable claim 1. As a result, claim 3 is now allowable and Applicants respectfully request that the rejection of claim 3 be withdrawn.

**CONCLUSION**

Claims 1 through 6 and 8 through 15 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicants' undersigned attorney.

Respectfully submitted,



Stephen R. Christian  
Registration No. 32,687  
Attorney for Applicants  
P.O. Box 1625  
Idaho Falls, ID 83415-3899  
Phone: (208) 526-9140  
Fax: (208) 526-8339

Date: 17 Aug 2004